



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Wilhelm A. KELLER et al.

Title: BAYONET FASTENING DEVICE FOR THE
ATTACHMENT OF AN ACCESSORY TO A MULTIPLE
COMPONENT CARTRIDGE OR DISPENSING DEVICE

Appl. No.: 09/767,685

Filing Date: 01/24/2001

Examiner: Kenneth Bomberg

Art Unit: 3754

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APPEAL BRIEF UNDER 37 C.F.R. § 1.192

Commissioner for Patents
Washington, D.C. 20231

Sir:

This brief is in furtherance of the Notice of Appeal filed on September 26, 2003, in connection with the appeal of the final rejection of claims 8-10, 12-14, and 16-27 of the above-identified application. A check covering the fees required under 37 C.F.R. §1.17(f) is enclosed. Any fee deficiency or overpayment may be charged or credited to our Deposit Account 19-0741.

This brief is transmitted in triplicate in conformance with 37 C.F.R. §1.192(a).

I. REAL PARTY IN INTEREST

The real party in interest is MIXPAC SYSTEMS AG, the assignee of all right, title and interest in the present application.

II. RELATED APPEALS AND INTERFERENCES

The present application shares a common claim of priority as commonly owned Application No. 09/572,734, the final rejection of which was under appeal before the Board of Appeals & Interferences. That application was allowed on March 23, 2004, after amendment upon remand to the Examiner.

III. STATUS OF CLAIMS

Claims 8-27 are pending. Claims 11 and 15 are withdrawn from consideration. Claims 8-10, 12-14 and 16-27 have been rejected. The rejection of claims 8-10, 12-14 and 16-27 is appealed. A copy of the pending claims is presented in the APPENDIX.

IV. STATUS OF AMENDMENTS

No amendment to the claims has been filed subsequent to rejection of claims 8-10, 12-14 and 16-27 in the Office Action of May 29, 2003.

V. SUMMARY OF INVENTION

The present invention relates to a dispensing assembly that includes a dispensing appliance with a plurality of chambers, such as a multi-chamber cartridge or pump, a mixer that attaches to the dispensing appliance, and a detachable closure member for closing the dispensing appliance when the mixer is detached. The dispensing appliance and the mixer have complementary bayonet couplings that form a bayonet assembly. The dispensing device has cylindrically-shaped outlets. Respective mixer inlets and plugs connect to the outlets of the dispensing device.

According to one feature of the invention, the outlets of the dispensing device have different configurations (for example, different sizes) so that the inlets of the mixer may be connected to the dispensing appliance in only one orientation. This feature serves to avoid inadvertent attempts to connect the respective inlets of a mixer or plugs of the closure member with the wrong outlets of a cartridge or other dispensing device.

Multiple component dispensing assemblies are used to dispense components, such as two reactive chemicals from a cartridge, for example, to a mixer, where the components are combined and then dispensed. There is a need to connect and attach a mixer or other accessory to a dispensing appliance in a predetermined orientation, and to do so in a way that avoids cross-contamination of the reactive components. Such cross-contamination may cause an undesirable reaction between chemical components at the interface between the mixer and the cartridge, for example, and this may result in clogging of the outlets.

Addressing these limitations, the specification describes various embodiments having different coding elements that ensure that a the mixer or closure member

attaches to the dispensing appliance in only one orientation so that cross-contamination is avoided. The claimed invention is particularly drawn to an embodiment in which the coding elements comprise outlets of the dispensing device having different configurations relative to each other, and a closure member having coding elements configured to correspond with the outlets so that the closure member can attach to the dispensing appliance in only one orientation.

One embodiment of the invention of the subject claims is illustrated and described in reference to Figs. 8a and 9a. In that embodiment, a dispensing appliance has outlets 28a and 29a that are dissimilarly sized. Corresponding mixer inlets 14 and 15a connect with the outlets 28a, 29a. As noted on page 10 of the specification, such system for coded attachment also allows for coded attachment of closure caps or other accessories, thus preventing cross-contamination and closure of the dispensing appliance.

VI. ISSUES

The issue presented on appeal is whether claims 8-10, 12-14, and 16-27 are patentable over U.S. Patent No. 5,137,182 to Keller in view of U.S. Patent No. 5,413,253 to Simmen.

VII. GROUPING OF CLAIMS

Applicant submits that claims 8-10, 12-14 and 16-22 and 27 stand or fall together for purposes of this appeal. Additional arguments in support of the patentability of dependent claims 23-26 are presented below.

VIII. ARGUMENT

A. Independent Claims 8, 14, and 27 are Patentable over Keller '182 in view of Simmen

The pending claims stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Keller, U.S. Patent No. 5,137,182, in view of Simmen, U.S. Patent No. 5,413,253. The rejection of the claims is based on the embodiment shown in Fig. 7 of the Keller '182 patent. At column 3, lines 11-15, the Keller '182 patent states that "Depending on whether the components are to be applied in the proportion 1:1 or some other proportion, the cylinders 2, the dispensing canals 4, and the cross-sections of the matching stoppers 14 may be identical or different." (Col. 3, ll. 11-15.) Based on this teaching, the Office Action concludes that "the coding elements for coded

introduction being dissimilarly sized, shaped and visually different inherently follow.” The Office Action acknowledges that Keller ‘182 fails to teach explicitly the use of an associated mixer, and relies on Simmens as suggesting this feature. The Keller ‘182 patent, however, also contains no teaching or suggestion to utilize different outlets on a dispensing appliance or plugs on a closure member for coded alignment and introduction of the closure member into the dispensing appliance as set forth in independent claims 8, 14, and 27.

More specifically, independent claim 8 is drawn to a dispensing assembly. The dispensing assembly includes “a dispensing appliance including a plurality of chambers each having a cylindrical-shaped outlet.” The assembly also includes a mixer, and a detachable closure member with a plurality of plugs corresponding in number to the outlets of the dispensing appliance. In contrast to the assembly of the Keller ‘82 patent, the assembly includes *“complementary coding elements formed on said dispensing appliance and said mixer to permit said inlets of said mixer to be aligned with and connected to the respective outlets of said dispensing appliance in only one orientation.”* Claim 8 further recites that the coding elements comprise *“outlets of a different configuration relative to each other and said inlets being configured to conform thereto.”* With respect to the closure members, claim 8 recites that the coding elements are *“configured in the same manner as the mixer to connect with the dispensing appliance in only one orientation.”*

Independent claim 14 is drawn to a dispensing appliance. As recited in claim 14, the outlets of the appliance are “of a different configuration from each other to permit the respective inlets of the mixer to align with and connect to said outlets in only one orientation.” Claim 14 further recites “a detachable closure member for closing said dispensing appliance when detached from the mixer, said closure member having a cylindrical-shaped plug for closing each said outlet, each said plug being configured to align with and connect to each said outlet of said plurality of chambers in only one orientation.”

Independent claim 27 is drawn to a closure member for a dispensing appliance having outlets that are “cylindrical-shaped and of a different configuration from each other to permit the respective inlets of the mixer to align with and connect to the outlets of the dispensing appliance in only one orientation.” As recited in claim 27, the closure member has “a plurality of cylindrical-shaped plugs corresponding in number to

the outlets of the dispensing appliance for closing each said outlet.” Each plug is “configured to align with and connect to each outlet in only one orientation.”

It is respectfully submitted that the neither reference includes a combination in which the closure plug aligns with outlets of a dispensing appliance in the manner recited in the claims. While the Keller '182 patent refers to stoppers 14 of different cross-section, that difference in cross-section follows from the acknowledgment that different volumes of containers may require dispensing canals 4 to have different cross-sections. But there is no indication or suggestion to utilize differently sized or shaped plugs as “complementary coding elements.” Such coding may be regarded as inherent only if one were to speculate in hindsight as to whether stoppers 14 of different cross-sections would be sufficiently different to serve as coding elements to permit alignment and connection in only one orientation as recited in claim 1. There is not suggestion or teaching to that effect in the Keller '182 patent as to a difference in size.

Additionally, neither the cited Keller patent nor Simmen teach describe or suggest the particular coding elements recited in the claims. Specifically, the claims indicate that the complementary coding elements constitute corresponding, cylinder-shaped appliance outlets and closure member plugs. While the Keller '182 patent discloses a stopper with stoppers 14 that match the dispensing canals 4, as illustrated in Fig. 1, the shape of the stoppers 14 are not cylindrical. Thus, the particular coding element recited in the claims is not found in either the primary or secondary references.

Again, the rejection of the claims is premised on the suggestion in the Keller '182 patent of using different cross-sectional outlets to match particular volumes. According to the Office Action, this inherently results in outlets of different configurations. Even were the cross-sectional outlets modified for this purpose, such modification of the outlets would not result in cylindrical-shaped outlets or corresponding cylinder-shaped plugs, each having different configurations so as to ensure coded attachment.

For these reasons, Applicant submits that the Office Action fails to establish a prima facie case of obviousness as to independent claims 8, 14, and 27.

B. Claims 23-26 Recite Additional Features That Are Absent From the Keller '182 in view of Simmen

Claim 23 depends from claim 14 and recites means for preventing contact between the outlets and the plugs, thereby preventing cross-contamination. Claim 24

depends from claim 23 and more specifically indicts that such means comprises protrusions provided on the front surface of the dispensing appliance. Claims 25 and 26 recite similar features with respect to the dispensing assembly of claim 8. Thus, these claims recite a combination that include, inter alia, both cylindrically-shaped outlets that serve as coding elements, and additional protrusions that prevent contact.

The Office Action fails to address these claims specifically. Moreover, it is respectfully submitted that neither the Keller '182 patent nor Simmen disclose this particular combination of features.

For this additional reasons, Applicant submits that the Office Action fails to establish a prima facie case of obviousness as to dependent claims 23-26.

IX. CONCLUSION

In view of the foregoing, it is respectfully submitted that the claims are patentable and that this application is in condition for allowance.

Respectfully submitted,

Date: 3/26/04

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Should additional fees be necessary in connection with the filing of this paper, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge Deposit Account No. 19-0741 for any such fees; and applicant(s) hereby petition for any needed extension of time.

APPENDIX

8. A dispensing assembly, comprising:

a dispensing appliance including a plurality of chambers each having a cylindrical-shaped outlet and a first bayonet coupling;

a mixer including a housing with a plurality of inlets corresponding in number to the outlets, each inlet being configured to engage a respective one of said outlets, a mixer element disposed in said housing, and a second bayonet coupling complementary with said first bayonet coupling of said dispensing appliance, said first bayonet coupling being detachable from said second bayonet coupling and together forming a detachable bayonet assembly;

a detachable closure member for closing said dispensing appliance when said mixer is detached from the dispensing appliance, said closure member having a plurality of plugs corresponding in number to the outlets for closing each of said outlets; and

complementary coding elements formed on said dispensing appliance and said mixer to permit said inlets of said mixer to be aligned with and connected to the respective outlets of said dispensing appliance in only one orientation said coding elements comprising outlets of a different configuration relative to each other and said inlets being configured to conform thereto;

wherein said closure member includes coding elements configured in the same manner as the mixer to connect with the dispensing appliance in only one orientation.

9. A dispensing assembly according to claim 8, wherein said outlets are of different size relative to each other and said respective inlets are configured to conform thereto to permit said inlets of said mixer to be aligned with and connected to the respective outlets of said dispensing appliance in only one direction.

10. A dispensing assembly according to claim 8, wherein said outlets are of different shape relative to each other and said respective inlets are configured to conform thereto to permit said inlets of said mixer to be aligned with and connected to the respective outlets of said dispensing appliance in only one direction.

12. A dispensing assembly according to claim 8, further comprising visual alignment means provided on said dispensing appliance.

13. A dispensing assembly according to claim 8, further comprising a coupling ring for attachment of said closure member to said dispensing appliance.

14. A dispensing appliance for a mixer, the mixer having a plurality of inlets, the dispensing appliance comprising:

a plurality of chambers each having cylindrical-shaped outlet for engagement with the inlets of the mixer, each said outlet of said chambers being of a different configuration from each other to permit the respective inlets of the mixer to align with and connect to said outlets in only one orientation; and

a bayonet coupling on said dispensing appliance for detachably connecting the mixer to said dispensing appliance; and

a detachable closure member for closing said dispensing appliance when detached from the mixer, said closure member having a cylindrical-shaped plug for closing each said outlet, each said plug being configured to align with and connect to each said outlet of said plurality of chambers in only one orientation.

16. A dispensing appliance according to claim 14, further comprising a coupling ring for attachment of said closure member to said dispensing appliance.

17. A dispensing appliance according to claim 14, wherein each said outlet of said chambers is of a different size from each other said outlet.

18. A dispensing appliance according to claim 14, wherein each said outlet of said chambers is of a different shape from each other said outlet.

19. A dispensing appliance according to claim 1, wherein said dispensing appliance is a cartridge.

20. A dispensing assembly according to claim 8, wherein said dispensing appliance is a cartridge.

21. A dispensing appliance according to claim 14, wherein said dispensing appliance is a cartridge.

22. A dispensing appliance according to claim 14, further comprising visual alignment means.

23. A dispensing appliance according to claim 14, further comprising means for preventing contact between said outlets and said plugs, thereby preventing cross-contamination.

24. A dispensing appliance according to claim 23, wherein said means for preventing contact comprises protrusions provided on a front surface of said dispensing appliance.

25. A dispensing assembly according to claim 8, further comprising means for preventing contact between said outlets of said dispensing appliance and either said plugs or said mixer inlets, thereby preventing cross-contamination.

26. A dispensing appliance according to claim 25, wherein said means for preventing contact comprises protrusions provided on a front surface of said dispensing appliance.

27. A closure member for a dispensing appliance having a bayonet coupling, wherein the dispensing appliance includes a bayonet coupling and a plurality of chambers each having an outlet for engagement with the inlets of a mixer, each said outlet of said chambers being cylindrical-shaped and of a different configuration from each other to permit the respective inlets of the mixer to align with and connect to the outlets of the dispensing appliance in only one orientation, the closure member having a plurality of cylindrical-shaped plugs corresponding in number to the outlets of the dispensing appliance for closing each said outlet, each plug being configured to align with and connect to each outlet in only one orientation.